



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/030,365	01/02/2002	Reinhard Langer	Mo-6888/LeA 33,693	7436
34947	7590	10/20/2004	EXAMINER	
LANXESS CORPORATION PATENT DEPARTMENT/ BLDG 14 100 BAYER ROAD PITTSBURGH, PA 15205-9741			TOOMER, CEPHIA D	
			ART UNIT	PAPER NUMBER
			1714	

DATE MAILED: 10/20/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/030,365	Applicant(s) LANGER ET AL. S.C.	
	Examiner Cephia D. Toomer	Art Unit 1714	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-25 is/are pending in the application.
 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 13-25 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>3/02</u> | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

Specification

1. The specification has not been checked to the extent necessary to determine the presence of all possible minor errors. Applicant's cooperation is requested in correcting any errors of which applicant may become aware in the specification.

Claim Rejections - 35 USC § 112

2. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

3. Claims 13-25 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 13 is rejected because applicant is claiming a process of oxidizing an organic compound; however, the claim appears to be a process of forming a peroxy-carboxylic acid. Clarification and correction are required.

Claims 21-25 is rejected because claim 13 does not contain any process steps for oxidizing the claimed organic compounds.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 13-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over WO9104333.

WO teaches a process for the preparation of a peroxy carboxylic acid of the formula RCOOOH wherein R is an organic residue (alkyl, aryl, alkylaryl, which may be optionally substituted). See abstract.

The process comprises treating a carboxylic acid of the formula RCOOH with hydrogen peroxide in the presence of an enzyme such as a protease, or a lipase enzyme. The water generated by the process is removed. See abstract; page 7, lines 11-13. WO also teaches a process for the oxidation of organic compounds with the peroxycarboxylic acids prepared as described above, wherein the enzymatic synthesis of the peroxy carboxylic acids and oxidation of organic chemicals by means of peroxycarboxylic acids may be carried out simultaneously. See abstract; page 1, lines 3-10; page 2, lines 2-10. WO discloses Candida Antarctica as a preferred lipase. See page 4, lines 18-19. Examples of organic compounds that may be oxidized in this process include olefins (alkenes), sulfur-containing compounds or any compound susceptible to peroxycarboxylic acid oxidation. See page 6, lines 29-31, page 7, lines 14-27 and Examples. WO teaches the limitations of the claims other than the differences that are discussed below.

WO differs from the claims in that it does not teach the use of saturated aliphatic acid esters of a straight chain or branched chain saturated aliphatic carboxylic acid having 1-4 carbon atoms and an alcohol having the formula ROH wherein R is a straight chain or branched chain $\text{C}_3\text{-C}_{18}$ alkyl radical. However, no unobviousness is seen in

Art Unit: 1714

this difference because the use of esters over the free acids of WO is not a patentable difference because the skilled artisan would recognize that by use of the acids the same product will form. Furthermore, the use of a different starting material is obvious when the method is the same and the process yield the same product as the prior art. With respect to number of carbon atoms, WO teaches that R may be any hydrocarbon radical. This teaching suggests the acid forms of the claimed esters.

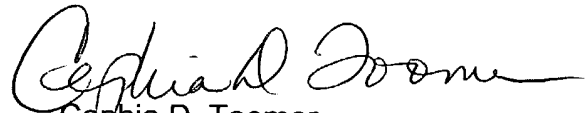
WO fails to specifically teach the limitations of claims 21-25. However, it would have been obvious to one of ordinary skill in the art to have oxidized the claimed compounds because WO teaches that "any compound susceptible to peroxycarboxylic acid oxidation" may be oxidized by its process. This teaching clearly suggests the claimed compounds.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cephia D. Toomer whose telephone number is 571-272-1126. The examiner can normally be reached on Monday-Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Vasu Jagannathan can be reached on 571-272-1119. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Art Unit: 1714

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Cephia D. Toomer
Primary Examiner
Art Unit 1714

10030365\101804